BY ORDER OF THE COMMANDER
AIR MOBILITY COMMAND

AMC INSTRUCTION 15-102

1 FEBRUARY 2002

Weather

AMC WEATHER MOBILITY TRAINING REQUIREMENTS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Supersedes AMCI 15-102, 30 November 1998

Pages: 8

Distribution: F

This instruction implements AFPD 15-1, *Atmospheric and Space Environmental Support* and establishes requirements and responsibilities for AMC weather mobility training. It applies to all AMC weather units providing support or augmentation to AMC forces. This instruction does not apply to Air National Guard or United States Air Force Reserve units.

SUMMARY OF REVISIONS

Adds New Tactical Forecast System (NTFS), Tactical Very Small Aperture Terminal (T-VSAT), and Tactical Meteorological Observing System (TMOS). Adds references to AFMAN 15-129, *Aerospace Weather Operations – Processes and Procedures* and AFMAN 15-135, *Combat Weather Team Operations*. Adds references to airfield services and mission support. Deletes Quick Reaction Communications Terminal III (QRCT III), Plotting Surface Codes, and Plotting Upper Air Codes as AMC Weather Mobility Training Standards. Changes Air Force Weather Information Network (AFWIN) to Joint Air Force and Army Weather Information Network (JAAWIN) and Secure Air Force Weather Information Network (SAFWIN) to Secure Joint Air Force and Army Weather Information Network (SJAAWIN). A bar (|) indicates revisions from the previous edition.

1. General. The objective of weather mobility training is to attain and maintain the highest standard of readiness skills necessary to support contingency and wartime operations. Mobility training must meet standards that ensure units and personnel maintain their capability for immediate and effective mission accomplishment.

2. Concept of Training. Each individual who supports contingency and wartime operations will train to the highest state of personal readiness commensurate with such duties.

3. Training Requirements. There are three types of mobility training requirements: general, technical, and theater or mission unique requirements.

3.1. General Requirements. General requirements include all administrative actions and training required to achieve deployable status and ensure personnel are provided with the basic wartime skills and knowledge needed to function in a combat environment. Weather personnel must be totally integrated with the deploying forces and understand how they are to be equipped, resupplied, and otherwise supported within the deployed chain of command. General requirements are determined by and accomplished through the local base IAW AMCPAM 36-4, *Air Base Operability Training*. These include: supply training, first aid/Self-aid Buddy Care training, chemical warfare defense training, Ability To Survive and Operate, small arms training, force structure and roles familiarization training, participation in local exercises, and safety.

3.2. Technical Training Requirements. These requirements ensure personnel have the Air Force Specialty Code-related technical knowledge and skills needed to do their job effectively at deployed locations. As a minimum, mobility tasked weather personnel will be certified to perform the airfield services (observing/eyes forward) element and mission support (staff, planning, and mission execution forecasting) duties and be familiar with tactical weather communications (TACCOM) and tactical meteorological (TACMET) equipment. Tasked personnel, TACCOM, and TACMET are listed in each unit Designed Operational Capability statement. Specific guidelines and standards for knowledge and proficiency are in **Attachment 2**.

3.3. Theater or Mission Unique Training Requirements. Mobility personnel must be trained to meet theater or mission unique requirements. These unique requirements will be specified and handled by the local unit. This training includes area climatology, data sources, area forecast techniques, topography, etc.

4. Responsibilities:

4.1. AMC weather units will establish a unit mobility program to train personnel to support their required wartime, contingency, and Air Expeditionary Force tasking. Units will follow all training requirements outlined in **Attachment 2**.

4.2. Units will track the training and document completion on appropriate forms (i.e., AF Form 797, **Job Qualification Standard**; AF Form 1098, **Special Task Certification and Recurring Training**) or any other appropriate format.

5. Reporting Procedures. Units will report their training status via SORTS IAW AFI 10-201, AMC Supplement 1, *Status of Resources and Training System (SORTS)*.

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Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

General References

AFPD 15-1, *Atmospheric and Space Environmental Support*

AFI 10-201, AMC Supplement 1, *Status of Resources and Training System (SORTS)*

AFMAN 15-129*, Aerospace Weather Operations – Processes and Procedures*

AFMAN 15-135*, Combat Weather Team Operations*

AMCI 15-101, *AMC Weather Operations*

AMCPAM 36-4, *Air Base Operability Training*

Technical References

AWS/FM 100-Series and 200-Series, Climate/Weather Regime Information for Selected Geographical Areas

AWS/FM 300/001, *Single Station Analysis of Surface Observations*

AWS FM 300/002, *Single Station Analysis of Upper Air Observations*

AWS/FM 300/004, *Diagrams, Charts, and Other Information for Performing Single Station Analysis and Forecasting in the Field*

AWS/FM 300/005, *Conversion Tables, Miscellaneous Charts*

Abbreviations and Acronyms

ESK—Electronic Staff Weather Officer Kit

GPS—Global Positioning System

JAAWIN—Joint Air Force and Army Weather Information Network

JMV—Navy Joint Meteorological and Oceanographic Viewer

MEF—Mission Execution Forecast

MOSKIT—Manual Observing System Kit

NIPRNET—Non-secure Internet Protocol Router Network

NTFS—New Tactical Forecast System

SAR—Support Assistance Request

SIPRNET—Secure Internet Protocol Router Network

SJAAWIN —Secure Joint Air Force and Army Weather Information Network

SKEW-T—Analysis, vertical cross section

SORTS —Status of Resources and Training System

STT—Small Tactical Terminal

TACCOM—Tactical Weather Communications

TACMET—Tactical Meteorological

TAF—Terminal Aerodrome Forecast

TO—Technical Order

T-VSAT—Tactical Very Small Aperture Terminal

Attachment 2

AMC WEATHER MOBILITY TRAINING STANDARDS

A2.1. Use the following standards to meet the AMC weather mobility training requirements on technical and theater or mission unique training. The standards are best attained through periodic training, however, frequency of training is determined by the needs of the unit. In addition to the unit training requirements established by your host base mobility training plan, all weather personnel in mobility positions must be able to meet the following standards while in Mission Oriented Protective Posture four.

A2.2. TACCOM Equipment:

A2.2.1. ALDEN 9315TR/TRT (Minifax): Personnel must be able to set up the 9315TR/TRT and perform a series of tasks. All personnel must be able to correctly set up equipment and receive graphic and alphanumeric data (when available) within 1 hour. Personnel must be able to perform operator maintenance in accordance with applicable operator manuals/Technical Orders (TOs). Personnel must be knowledgeable of each aspect of the equipment from configuring the system (e.g., loading frequencies, Initial Operational Capabilities) to acquiring data. This is a one-person task.

A2.2.2. Small Tactical Terminal (STT): Personnel must be able to correctly set up and operate all STT equipment within 2 hours. Personnel must properly load the most current ephemeris data, receive/display/print a copy of a satellite pass, and loop satellite pictures. Personnel must be able to perform operator maintenance in accordance with applicable operator manuals/TOs. This is a two-person task.

A2.2.3. Electronic Staff Weather Officer Kit (ESK): Personnel must be able to correctly set up and properly connect the ESK to a telephone line or deployed communications systems within 30 minutes, and be proficient with installed software. This is a one-person task.

A2.2.4. Joint Air Force and Army Weather Information Network (JAAWIN) and Secure Joint Air Force and Army Weather Information Network (SJAAWIN): Weather personnel with access to the Non-secure Internet Protocol Router Network (NIPRNET)/Secure Internet Protocol Router Network (SIPRNET) must be able to access weather data/products and other information deemed relevant by unit leadership. Personnel must be able to demonstrate proficient use of the JAAWIN and SJAAWIN request editor to retrieve at least ten products. Of the ten products, the following must be downloaded and displayed, one product per type: observation, Terminal Aerodrome Forecast (TAF), standard bulletin, special produced bulletin (e.g., joint operations area forecast), model charts, specialized MM5 model graphics, and a satellite photo. Use message editor to read the mail message, if any. Complete these tasks within 1 hour after establishing adequate communications. This is a one-person task.

A2.2.5. Navy Joint Meteorological and Oceanographic Viewer (JMV): All deployment tasked weather personnel should train and become familiar with JMV. Personnel should use JMV to retrieve at least one full upper air series, SKEW-T, surface analysis, and prognosis. Personnel should be able to demonstrate proficient use of JMV, and should be able to use the JMV main menu to define, retrieve, and display, at a minimum, one of each type: upper air sounding, tropical cyclone warning (when available), high seas warning, any upper air analysis, and both Infrared and Visual satellite photos. Personnel should successfully complete these tasks within 1 hour after getting access to communications lines. (Note: JMV is the primary Navy internet/dial-up capability). This is a one-person task.

A2.2.6. NIPRNET/SIPRNET: Personnel must be familiar with requirements to gain required access. Network access should be the deployed unit's number one communications priority. This is a one-person task.

A2.2.7. Telephone Circuits: Personnel must be familiar with requirements to gain required access. This is a one-person task.

A2.2.8. NTFS: Personnel must be able to correctly connect NTFS to data source (NIPRNET/SIPRNET or T-VSAT), obtain products, operate successfully IAW users manual/operator instructions within 30 minutes of connectivity. This is a one-person task.

A2.2.9. T-VSAT: Personnel must be able to correctly set up equipment, obtain products, operate successfully IAW user manual/operator instructions within 30 minutes. This is a two-person task.

A2.2.10. Personnel must be able to perform all required self-test functions; determine the causes of failed tests; perform operator maintenance; and remove, replace, and/or charge the batteries IAW operator manuals/TOs and Concept of Operations for equipment listed above. Time to safely disassemble and pack TACCOM equipment should be approximately the same as set-up time.

A2.3. TACMET Equipment:

A2.3.1. GMQ-33 (Cloud Height Detector): Personnel must be able to correctly set up equipment, obtain a cloud height reading, and operate successfully IAW the applicable TOs within 15 minutes. This is a one-person task.

A2.3.2. TMQ-34 (Tactical Meteorological Observing Set): Personnel must be able to correctly set up equipment; obtain temperature, dew point, wind speed/direction, and station pressure; and operate successfully IAW the applicable TOs within 15 minutes. This is a one-person task.

A2.3.3. TMQ-36 (Transportable Wind Measuring Set): Personnel must be able to correctly set up equipment, obtain wind speed/direction, and operate successfully IAW the applicable TOs within 1 hour. This is a two-person task.

A2.3.4. Manual Observing System Kit (MOSKIT): Personnel must be able to correctly use equipment to include: obtain temperature, dew point, wind speed/direction, cloud height readings, and altimeter; and determine their latitude/longitude using the Global Positioning System (GPS) successfully with no errors. This is a one-person task.

A2.3.5. TMQ-53 (Tactical Meteorological Observing System): Personnel must be able to correctly set up equipment and obtain temperature, dew point, wind speed/direction, precipitation measurements, and altimeter. Personnel must also be able to obtain cloud height readings, lightning information, and present weather if the enhancement version is available. Personnel must be able to set up and operate the equipment successfully IAW applicable TOs and obtain information within 1 hour with no errors. This is a one-person task.

A2.3.6. Personnel must be able to perform all required self test functions; determine the causes of failed tests; perform operator maintenance; and remove, replace, and/or charge the batteries IAW operator manuals/TOs for equipment listed above. Time to safely disassemble and pack TACMET equipment should be approximately the same as set-up time.

A2.4. Airfield Services (Observing/Eyes Forward) Functions:

A2.4.1. Aviation Routine Weather Report: Personnel must be able to take, encode, record, and disseminate observations in a field environment. Given TACMET and TACCOM, they must be able to take a surface observation to include wind speed/direction, temperature, dew point, visibility/obstruction, sky condition, altimeter setting, precipitation amount, and any remarks. The observation must be taken, recorded, and disseminated within 15 minutes with a maximum of one error. This is a one-person task.

A2.4.2. Airfield Data: Personnel must be able to obtain airfield data. Given a Flight Information Publication or Universal Transverse Mercator map, determine airfield latitude, longitude, magnetic declination, elevation, runway orientation, and length within 15 minutes with no errors. This is a one-person task.

A2.4.3. Visibility Chart: Personnel must be able to construct an airfield visibility chart. Given laser range finder binoculars or a Topographic Line Map, a magnetic compass, and an acetate overlay, they must be able to construct a visibility chart for a specified location within 30 minutes. (***NOTE:*** Several map scales, 1:25,000 and 1:100,000, are ideal for this task. These maps are normally ordered through base operations.) This is a one-person task.

A2.4.4. Eyes Forward: Personnel must be able to assess potential impact of current weather conditions on the local installation and demonstrate coordination with the applicable operational weather squadron (OWS) regarding TAFs, advisories, warnings, and watches. Personnel must make initial contact and collaboration with the supported OWS within 2 hours of establishing weather communications. This is a one-person task.

A2.4.5. First-in/OWS Backup Airfield Support: Personnel, using available climatological and topographical data, satellite imagery, and other meteorological information that would be available at a deployed site, must demonstrate the ability to make, encode, and disseminate a 24-hour forecast for the location within 1 hour. Personnel must also demonstrate the ability to issue, amend, verify, and cancel Weather Warnings and Watches. This is a one-person task

A2.5. Mission Support Functions:

A2.5.1. Mission and Aircrew Support: Personnel must be able to prepare Mission Execution Forecasts (MEF) and brief aircrews using all available meteorological products IAW AFMAN 15-129; AFMAN 15-135*;* and AMCI 15-101, *AMC Weather Operations*. This is a one-person task.

A2.5.2. Chart Analysis (Strategic Center or OWS Provided Charts): Personnel must be able to identify significant features (e.g., high and low pressure centers) and frontal systems on strategic center or OWS provided charts for use in MEFs; and analyze a Skew-T/Log-P diagram for lifted condensation level, convective condensation level, inversions, and freezing level. Skew-T charts must be accomplished within 30 minutes with no more than two errors. This is a one-person task.

A2.5.3. Solar/Lunar Data: Personnel must become proficient in obtaining solar/lunar data using the MOSKIT GPS receiver. They must also demonstrate the backup capability to extract this data using any available solar/lunar software program. This is a one-person task.

A2.5.4. Effective Downwind Message: Personnel must be able to correctly decode an effective downwind message for a given location within 15 minutes with no errors. This is a one-person task.

A2.5.5. Chemical Downwind Message: Personnel must be able to correctly encode all required elements for a given location and prepare a chemical downwind message within 20 minutes with no errors. This is a one-person task.

A2.5.6. Support Assistance Request (SAR): Personnel must be knowledgeable in preparing a SAR IAW AFMAN 15-129.

A2.5.7. Single Station Analysis: Personnel must be knowledgeable in preparing a forecast using the Single Station Analysis techniques. *(*See **Attachment 1** for suggested references.)

A2.6. Theater or Mission Unique Training:

A2.6.1. Supported Plans: Personnel must know their deployment processing procedures and demonstrate knowledge of theater weather. In addition, when specified in the tasking Operations Plan, individuals must know the theater of deployment, deployed support requirements, the primary customer to be supported, and type of equipment needed to support the customer.

A2.6.2. Deployed Area Weather: Personnel must be familiar with area topography, climatology, and local effects for locations to which they are tasked to deploy in war plans. *(*See **Attachment 1** for suggested references.)